

Case Study Learning: Stick Welding Analysis Dissimilar Metal AISI 1080 and MILD STEEL

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ABSTRACT

Appropriate technological innovation often requires innovation, especially in material selection. The use of materials in appropriate technology today is mostly found by combining materials, both in design and in welding. Welding joints with different materials require special treatment so that the resulting welded joints are good. This study aims to analyze dissimilar welding of high carbon steel materials, namely per leaf used trucks which are equivalent to AISI 1080 and Mild Steel. Welding splicing is applied to appropriate technology, namely waste shredding machine. In use there are cracks in the welded joints between AISI 1080 and Mild Steel. Based on this, through the integration of the case learning method, this study seeks to analyze the welding process that is suitable for AISI 1080 and Mild Steel dissimilar materials.

With the integration of the case learning method it is intended to be able to increase students' understanding of the welding process that occurs in the field and be able to analyze it. The research method used was an experiment, the data collection method was carried out by visually testing the results of welding and damage using a toughness test and a hardness test through five test specimens. The test results will be used as the basis for the analysis of heat treatment that has been carried out in the welding process. The output of this research is in the form of mandatory output, namely international journal articles indexed Scopus Q3. The journal to be addressed is Technical Education and Training as long as the journal is still indexed by Scopus. If the journal is not indexed by Scopus when submitted, another comparable journal will be looked for. The results of this study will produce a corrugated metal gasket prototype that has been tested in the laboratory, namely TKT 3

Kata Kunci: Welding, Heat Treatment, dissimilar, hardness test, Case study learning